

Work Order ID 153284***153284***

Page 1

Tuesday, November 15, 2016 1:39:33 PM

Item ID: D5421-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Hose Fitting
Start Date: 11/18/2016 Start Qty: 5.00 ***5*** Cust Item ID:
Required Date: 12/2/2016 Req'd Qty: 5.00 ***5*** Customer:
Reference:

Approvals: Process Plan: **DAS 21** Date: **NOV 15 2016** Tooling: Date: Run Start ***NR1***
QC: **9-89** Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D5421	A								

100

0.00

100

Purchasing

Purchasing

Memo

Issue P/O:

34337

Purchase Part Number: (53485K22)

SUPPLIER: McMaster Carr

Certificate of conformity is required

0.00

5**NOV 16 2016****DAS 13**
9-89

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Packaging

Memo

0.02

5x**NOV 21 2016****DAS 26**
9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

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Page 2

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00							
120									
QC	Memo	0.02				5			DAS 38 9-89
Quality Control									NOV 22 2016
150	Identify as per dwg & Stock Location: <u>51168</u>	0.00							
150									
Packaging	Memo	0.02				5			DAS 6 9-89
Packaging									NOV 13 2016
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	0.08							16/11/24
Quality Control									DAS 21 9-89 NOV 23 2016

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WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Picklist Print

Tuesday, November 15, 2016 1:39:38 PM

Page 1

Work Order ID: 153284

153284

Parent Item: D5421-1

D5421-1

Parent Item Name: Hose Fitting

Start Date: 11/18/2016

Required Date: 12/2/2016

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP REV:A 16.10.07 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
53485K22 *53485K22* Hose Fitting		Purchased		No			Each	0.0000		5 **		NOV 21 2016	

DAS
26
9-89

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



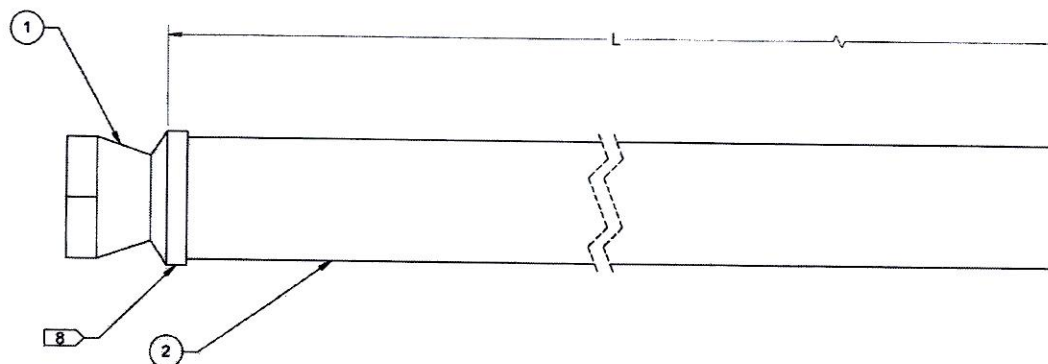
QA Closed: _____ Date: _____

Work Order update only ☐

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Date :	Step #:	QTY Effective :			MRB (QSI042) Approval	
Description Work Order Deviation		Disposition				
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER :						

ITEM	QTY -041	P/N	DESCRIPTION
X	X	D5421-041	OIL DRAIN HOSE ASSEMBLY
1	1	D5421-1	HOSE FITTING
2	1	D5421-3	HOSE

SPECIFICATION CONTROL DRAWING



ITEM NUMBER	DART P/N	DESCRIPTION	PART NUMBER	L (FEET)	COLOUR	MATERIAL
1	D5421-1	HOSE FITTING	53485K22	N/A	N/A	BRASS
2	D5421-3	HOSE	5288K11	10	BLACK	NITRILE RUBBER REINFORCED WITH ARAMID BRAID

D5421-041 OIL DRAIN HOSE ASSEMBLY

NOTES:

- 1) MATERIAL: SEE TABLE
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH P/N "D5421-041" USING D2729 LABEL INSTALLED WITH D2182-045 HEAT SHRINK
- 7) WEIGHT: 0.05 lbs
- 8) ENSURE THAT THE D5421-1 HOSE FITTING IS FULLY INSERTED INTO THE D5421-3 HOSE, SUCH THAT THE HOSE END IS COMPLETELY CONCEALED BY THE PLASTIC RING ON THE FITTING. (OPTIONAL INSTALLATION TOOL: MCMASTER CARR P/N 53685K11)

SHOP COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 153284 MCL

1611-15

RELEASED
 2016-10-05
 ECU 16-588

APPROVED

A NEW ISSUE		CC	16.04.21
REV.	DESCRIPTION	BY	DATE
DESIGN	CC		
DRAWN	CC		
CHECKED	VS		
MFG. APPR.	JLM		
APPROVED	HS		
DE APPR.	DS		
DATE	16.04.21		

DART AEROSPACE USA, INC.
 EUGENE, OREGON, USA

DRAWING NO. **D5421**
 TITLE **OIL DRAIN HOSE**
 REV. A
 SHEET 1 OF 1
 SCALE
 NTS

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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OTHER : _____					



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO34337

Purchase Order Date 11/16/2016

PO Print Date 11/16/2016

Page Number 2 of 6

Order From :

VU-MCM001

Ship To : DART AEROSPACE LTD

MCMASTER-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

330 995 5500

Ship To Contact

Ship To Phone

Ship Via:

Purolator ground ppd

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 10

Currency

USD

FOB

FCA - (Free Carrier)

Line Total: \$190.50

4 53485K22 Hose Fitting 11/18/2016 FN 5.00
Yes
11/18/2016

\$2.56 \$12.81

AS PER DWG D5421 REV. A
B153284

DAS
38
9-89

DAS
26
9-89

NOV 21 2016

Line Total: \$12.81

5 91525A120 washer 11/18/2016 50.00
Yes
11/18/2016

\$0.25 \$12.52

AS PER DWG D3456 REV. A
B152842

Line Total: \$12.52

6 92311A599 SET SCREW 11/18/2016 50.00
Yes
11/18/2016

\$0.20 \$10.13

AS PER DWG D2712 REV. B
B152870

Note:

11/16/2016



11/16/2016

200 Aurora Industrial Pkwy.
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO34337

Order Placed By
Chantal Lavoie

McMaster-Carr Number
3452355-03

Line	Product	Ordered	Shipped
1	91249A146 Black-Oxide Finish Pan Head Phillips Machine Screw 18-8 Stainless Steel, 6-32 Thread, 3/8" Length, Packs of 100	1 Pack	1 ✓
3	59915K274 PTFE-Lined Stainless Steel Ball Joint Rod End 3/8"-24 RH Male Shank, 3/8" Ball ID, 1-1/4" Long Thread	10 Each	10
4	53485K22 Push-on Brass Barbed Hose Fitting 1/4" ID, 7/16"-20 UNF 37 & 45 Degree Female Flared End, Packs of 5	DAS 1 Pack 38 1-89	1
5	91525A120 316 Stainless Steel Washer Oversized, 1/4" Screw Size, 0.281" ID, 1" OD, Packs of 25	2 Packs	2
6	92311A599 18-8 Stainless Steel Cup Point Set Screw 5/16"-24 Thread, 5/8" Long, Packs of 50	1 Pack	1
7	6605K56 Hook and Loop Cable Ties 24" Overall Length, Meets UL 94V2, Packs of 5	2 Packs	2
8	54895T44 Hooks for Protective Curtains, Packs of 10	3 Packs	3
10	5547T5 Chemical Resistant PVC/Polyurethane Work Boot Safety Toe, 15" High, Black, Steel Shank, Men's Size 12	1 Pair	1
11	24215T61 Light Duty Caster with Hood 2" Nylon Wheels, 3/8" x 1" Friction Stem	10 Each	10
12	7510A653 Plastic Syringe with Luer Lock Tip, 0.34 oz. Capacity, Packs of 10, Gary	10 Packs	10
13	6641A41 Loctite Gasket Maker #598, 2.36 oz. Tube	10 Each	10

Shipped separately from our Chicago warehouse on 11/16

9	8841A21 Multi-Diameter Step Drill Bit High-Speed Steel, 13 Sizes, 1/8"-1/2", 1/4" Shank Diameter, 1/8" Maximum Thickness	4 Each	4
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